

25th 8th week(04/29/24 - 05/03/24) schedule for LHD experiment

Weekly report :

Date	Day of the week	Bt direction	Schedule of the day		Wall	Gas	Experiment implementation system	Remark																																																		
			Morning (～ 12:15)	Afternoon (12:15 ～ 16:45)																																																						
4/29	Mo.																																																									
4/30	Tu.					None																																																				
5/1	We.	CCW	[TC](10:30 ～ 16:45)ECH, NBI Validation of neutral beam current drive in LHD for numerical estimation, Assessment of geometrical effect on transport through quadrupole field scan <table><thead><tr><th>#</th><th>Opt. Pol.</th><th>Rax</th><th>Bax</th><th>gamma</th><th>Bq</th><th>SC</th></tr></thead><tbody><tr><td>1</td><td>CCW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td>CCW</td><td>3.6</td><td>1.375</td><td>1.1739</td><td>100.0</td><td></td></tr><tr><td>3</td><td>CCW</td><td>3.6</td><td>1.375</td><td>1.2538</td><td>0.0</td><td></td></tr></tbody></table>			#	Opt. Pol.	Rax	Bax	gamma	Bq	SC	1	CCW	3.6	2.75	1.2538	100.0		2	CCW	3.6	1.375	1.1739	100.0		3	CCW	3.6	1.375	1.2538	0.0		None Div Cryo	H2	[Responsible person]K.Tanaka / H.Hayashi [Coordinator#1]H.Nakano [Coordinator#2]T.Tokuzawa [ECH]N.Kenmochi [Gas·vacuum·shutter]B/C [Low temp.]ohba.kouki [LID power]M.Kawai/K.Nagahara [Coil power]takami.shigeyuki [central ctrl.]maeno.hiroya [data proc.]M.Ohsuna [EXP LAN]inoue.tomoyuki	(TC)Required Diag.: MSE, FIDA, CXS, PCI, Reflectometer (id:738) Mag. Conf.: Exp. with low gamma (Combined) (id:744) Mag. Conf.: Bq = 0%, 150%, 200% (id:752) NBI: Injection into the discharges with low fields																					
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5/2	Th.	CW	[TC](10:30 ～ 11:45)ECH, NBI Demonstration of real-time ECH plasma control by the data assimilation system ASTI <table><thead><tr><th>#</th><th>Opt. Pol.</th><th>Rax</th><th>Bax</th><th>gamma</th><th>Bq</th><th>SC</th></tr></thead><tbody><tr><td>1</td><td>CW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr></tbody></table>	#	Opt. Pol.	Rax	Bax	gamma	Bq	SC	1	CW	3.6	2.75	1.2538	100.0		[IA](11:45 ～ 13:30)ECH, NBI Interaction between GAM and turbulence <table><thead><tr><th>#</th><th>Opt. Pol.</th><th>Rax</th><th>Bax</th><th>gamma</th><th>Bq</th><th>SC</th></tr></thead><tbody><tr><td>1</td><td>CW</td><td>3.75</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td>CW</td><td>3.75</td><td>1.25</td><td>1.2538</td><td>100.0</td><td></td></tr></tbody></table>	#	Opt. Pol.	Rax	Bax	gamma	Bq	SC	1	CW	3.75	1.375	1.2538	100.0		2	CW	3.75	1.25	1.2538	100.0		[TC](13:30 ～ 16:45)ECH, NBI Characteristics of millimeter wave vortex on heating, current drive, and propagation in high-density plasmas <table><thead><tr><th>#</th><th>Opt. Pol.</th><th>Rax</th><th>Bax</th><th>gamma</th><th>Bq</th><th>SC</th></tr></thead><tbody><tr><td>1</td><td>CW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr></tbody></table>	#	Opt. Pol.	Rax	Bax	gamma	Bq	SC	1	CW	3.6	2.75	1.2538	100.0		Div Cryo	H2, Ar	[Responsible person]N.Tamura / H.Hayashi [Coordinator#1]T.kobayashi/K.Ogawa [Coordinator#2]A.Shimizu/T.Kawate [ECH]R.Yanai [Gas·vacuum·shutter]A/B [Low temp.]ohba.kouki [LID power]M.Kawai/K.Nagahara [Coil power]tanoue.hiroyuki [central ctrl.]maeno.hiroya [data proc.]M.Ohsuna [EXP LAN]nakamura.osamu	(TC)Realtime-TS, BS, C-CXS(Ti) with NBI#5 [IA]HIBP, MSE, LID(cancel, 12:05-13:30) (TC)ECE, cECE, HIBP, realtime-TS, BS (id:724) Impurity gas puff (id:730) ECH: Overdense heating (id:731) Mag. Conf.: Using LID coil (id:733) High plasma current exp. (100 kA =< Ip < 150kA) (Combined) (id:748) ECH: off-axis injection (Combined) (id:752) NBI: Injection into the discharges with low fields
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Daily Schedule

Prepared by

N.Tamura

Date	Experimental Subject																																														
2024/5/1(Wed)	Validation of neutral beam current drive in LHD for numerical estimation, Assessment of geometrical effect on transport through quadrupole field scan																																														
Exp. No.	Experimental Session Group						Session Coordinator																																								
1357	TC						H.Nakano[2209] / T.Tokuzawa[2217]																																								
Time Table	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																																
		U P	[TC]							D N																																					
Details and Experimental Conditions														Gas																																	
[TC](10:30 ~ 16:45) ECH, NBI 10:30-12:05 Validation of neutral beam current drive in LHD for numerical estimation (H. Nuga) 12:05-12:15 NBI calib. (3 shots) 12:15-12:30 [Change of Mag. Config.: 3.6m, 2.75T, 1.2538, 100% -> 3.6m, 1.375T, 1.1739, 100%] 12:30-16:45 Assessment of geometrical effect on transport through quadrupole field scan (H. Yamada (U. Tokyo), N. Tamura) # [Change of Mag. Config.: 3.6m, 1.375T, 1.1739, 100% -> 3.6m, 1.375T, 1.2538, 0%] will be done around 2 pm. # Demagnetization will be done for the reversal of IS coil polarity. Sequence:3min <table><thead><tr><th>#</th><th>Option</th><th>Polarity</th><th>Rax(m)</th><th>Bax(T)</th><th>gamma</th><th>Bq(%)</th><th>Subcooled</th></tr></thead><tbody><tr><td>1</td><td></td><td>CCW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td></td><td>CCW</td><td>3.6</td><td>1.375</td><td>1.1739</td><td>100.0</td><td></td></tr><tr><td>3</td><td></td><td>CCW</td><td>3.6</td><td>1.375</td><td>1.2538</td><td>0.0</td><td></td></tr></tbody></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CCW	3.6	2.75	1.2538	100.0		2		CCW	3.6	1.375	1.1739	100.0		3		CCW	3.6	1.375	1.2538	0.0		H2	
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Prepared by

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1358	TC/IA						T.kobayashi[2231] / A.Shimizu[2454] K.Ogawa[2229] / T.Kawate[2256]																																
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[TC](10:30 ~ 11:45) ECH, NBI 10:30-11:45 Demonstration of real-time ECH plasma control by the data assimilation system ASTI (S. Murakami (Kyoto Univ.), N. Kenmochi) # NBI calib. (3 shots) will be done between 10:30-11:45. NBI pattern #7: (#1, #2, #3, #4, #5) - (#1, #2, #3, #5) - (#1, #2, #3) - (#1, #2) Sequence:3min <table><tr><th>#</th><th>Option</th><th>Polarity</th><th>Rax(m)</th><th>Bax(T)</th><th>gamma</th><th>Bq(%)</th><th>Subcooled</th></tr><tr><td>1</td><td></td><td>CW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CW	3.6	2.75	1.2538	100.0		H2,Ar									
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[IA](11:45 ~ 13:30) ECH, NBI 11:45-12:05 [Change of Mag. Config.: 3.6m, 2.75T -> 3.75m, 1.375T] 12:05-13:30 Interaction between GAM and turbulence (T. Tokuzawa) # [Change of Mag. Config. 3.75m, 1.375T -> 3.75m, 1.25T] will be done between 12:05 and 13:30. Sequence:3min <table><tr><th>#</th><th>Option</th><th>Polarity</th><th>Rax(m)</th><th>Bax(T)</th><th>gamma</th><th>Bq(%)</th><th>Subcooled</th></tr><tr><td>1</td><td></td><td>CW</td><td>3.75</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td></td><td>CW</td><td>3.75</td><td>1.25</td><td>1.2538</td><td>100.0</td><td></td></tr></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CW	3.75	1.375	1.2538	100.0		2		CW	3.75	1.25	1.2538	100.0		H2,Ar	
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